

**ADDENDUM TO RESPONSE TO PUBLIC COMMENTS
ELECTRONIC HAZARDOUS WASTE REGULATIONS
DTSC CONTROL NUMBER: R-01-06**

**15-DAY PUBLIC NOTICE AND COMMENT PERIOD
NOTICE OF PUBLIC AVAILABILITY OF POST-HEARING CHANGES
OCTOBER 21, 2002 TO NOVEMBER 4, 2002
(15-DAY NOTICE)**

Commenter A: **Electronic Industries Alliance**

Comment A1: DTSC should conditionally exempt CEDs from regulation as hazardous waste.

Response: In the **Alternatives Considered** section of the Initial Statement of Reasons, pages 25 and 26, the alternative to allow a conditional exemption for CEDs was analyzed by DTSC. In addition, this comment was addressed in the Response to Comment 24A in Section 3.3 of the Response to Comments for the 45-Day Public Notice and Comment Period (45-Day Notice). DTSC maintains that the universal waste regulations are a better alternative.

Comment A2: The proposed regulations should allow self-implementing authorization for recycling of CEDs as is already provided for CRTs, thereby eliminating the need for a permit to recycle CEDs (as the regulations would require).

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Public Notice and Comment Period Notice of Public Availability of Post-Hearing Changes (15-Day Notice). DTSC may establish requirements for CED recyclers at a later date.

Comment A3: Clarify whether the scrap metal exemption still applies to circuit boards or whether recycling activities would be subject to full HW permit requirements. If a full permit is required, then there would be significant financial impacts on existing CEDs handlers, etc.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. Note that nothing in the regulations alters section 66261.6, subdivision (a)(3)(B)¹, which contains the scrap metal exemption.

Comment A4: The CED definition includes devices that have no electrical property, much less any obvious hazardous components. The universe of the regulations is too

¹ For purposes of this Addendum to Response to Public Comments, all regulatory references are to the California Code of Regulations, title 22, division 4.5, unless otherwise specified.

broad (could include toasters to tooth brushes) and will subject many to violations if they mismanage or incorrectly designate their waste CEDs as non-hazardous CED.

Response: DTSC has reviewed the comment and has determined that no regulatory change is necessary. DTSC disagrees that the definition of CEDs is too broad or too confusing to determine which consumer electronic devices are regulated. The definition of CEDs clearly states that only those CEDs that exhibit the hazardous waste characteristic of toxicity are regulated under chapter 23. DTSC has provided, in the definition of CEDs, as examples a list of electronic devices that may meet the hazardous waste criteria for toxicity. See the Response to Comments, section 3.3 for a detailed discussion on the definition of CEDs. Also, the "Applicability" section of the regulations for CEDs (section 66273.3) clarifies further which CEDs are regulated.

Comment A5: Although DTSC received comments that requested substantive changes, it issued regulations of ~~Asweeping scope@~~ and it made none of the substantive changes requested by commenters when it issued the 15-Day Notice.

Response: DTSC is required by the Administrative Procedures Act (APA) to review and consider "each objection or recommendation made regarding the specific adoption, amendment, or repeal proposed, together with an explanation of how the proposed action has been changed to accommodate each objection or recommendation, or the reasons for making no change." (Government Code section 11346.9, subsection (a)(3)). In the Response to Public Comment for the 45-Day Notice, DTSC evaluated and considered each public comment received, and whether that comment was "substantive" or "non-substantive" in nature. After careful analysis of each comment, DTSC made a determination of whether the comment required an amendment to the regulation. In those cases where amendments were necessary, DTSC published those amendments to the proposed regulations in the 15-Day Notice. When DTSC determined that a commenter's suggested amendment was not warranted or not within the scope of the rulemaking, DTSC provided, in the Response to Public Comment for the 45-Day Notice, a detailed explanation of why that amendment was not made. In consideration of Comment A5, DTSC has complied with the APA with regard to the review and consideration of all public comments.

Comment A6: This approach to rulemaking is unprecedented in the hazardous waste area. (The comment claims DTSC engaged in limited consultation with the stakeholder community, limited analytical testing, and peer review.)

Response: DTSC followed the same procedures and used the same process for these regulations as it has for many previous rulemaking projects. See Response to

Comment A5 above, regarding the procedural requirements for review of and response to public comments. This rulemaking is the result of DTSC's analysis (which began in August 2001) of the electronic waste issues that face California and the nation.

Comment A7: The statutory deadline of Health and Safety Code section 25150.6 is incorrect as the basis for meeting the January 1, 2003 date for the adoption of the regulations to regulate CEDs under the universal waste rule. Sections 66260.22 and 66260.23 provide DTSC with the authority to add hazardous wastes (i.e., CEDs) to the State's existing universal waste regulations. Suggest that DTSC wait until after January 1, 2003 to adopt the proposed regulations for CEDs so that DTSC can develop the necessary data and provide adequate analysis to support a factually and technically sound approach for the management of CEDs.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. This comment references statements made in the "Preliminary Analysis and Findings Required by Health and Safety Code Section 25150.6," which was available for public review during the 45-Day Notice period, but which is not part of the 15-Day Notice period. However, for more information on this subject, see Response to Comment 28L in Section 4.3 of the Response to Comments for the 45-Day Notice.

Comment A8: The scope of the definition of CEDs is incomprehensible. The assertion that the mere presence of brominated flame retardants is grounds for listing CEDs as hazardous waste, or potentially as a hazardous waste, would subject items such as couches, beds, chair, etc., to regulation.

Response: See Response to Comment A4, above. DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. DTSC also notes that the commenter has misinterpreted the scope of the regulations, but in Comment A9 the commenter correctly interprets the scope of the CED definition. DTSC does not believe that the regulated community would consider couches, beds, or chairs to be hazardous electronic devices, as the commenter has stated.

Comment A9: The proposed regulations appear to establish a presumption that all CEDs are hazardous waste and require everyone to either test their waste electronic devices to determine that they are not hazardous, or obtain a hazardous waste facility permit to process the CEDs.

Response: DTSC has considered the comment and has determined that no regulatory change is appropriate for two reasons. First, in response to a previous similar comment submitted during the 45-Day comment period, DTSC has amended section 66273.9 to clarify that the requirements apply only to those CEDs that exhibit a characteristic of a hazardous waste. Second, the regulations do not contain any new hazardous waste identification criteria. Existing law and regulations require anyone who generates waste, including waste CEDs, to determine if the waste they produce is hazardous waste and to manage it properly if it is. These regulations do not alter those pre-existing requirements. The regulations are only relevant once the generator has made the hazardous waste determination. At that point, the regulations provide a less expensive management alternative (i.e., manage the waste as universal waste) for most people.

Comment A10: DTSC should make the hazardous waste determination for each and every specific CED in California and if DTSC pursued this alternative, in lieu of the proposed regulations, the regulations would be unnecessary.

Response: DTSC has considered the comment and has determined that no regulatory change is appropriate for two reasons. It is the generator's responsibility to determine whether their waste exhibits a characteristic of hazardous waste. If a waste exhibits a characteristic of hazardous waste, it is regulated as a hazardous waste. It is not DTSC's responsibility to make this determination.

Comment A11: DTSC should initiate regulation of CEDs based on sound, scientific data (as it did for the emergency cathode ray tube (CRT) regulations and the use of the Toxicity Characteristic Leaching Procedure data provided in the January 2002 edition of *Environmental Science and Technology*) and not on speculation.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. Also, see Response to Comments 12G and 14F in Section 4.5 of the Response to Comment for the 45-Day Notice for a detailed explanation of DTSC's compliance with the use of "Studies Relied On."

Comment A12: No evidence was presented in rulemaking documents of any testing of a CED by California's hazardous waste testing criteria. A DTSC official has stated that DTSC is not testing electronic waste for brominated flame retardants. DTSC is currently testing electronic wastes and that the results of these tests would be helpful to the regulated community.

Response: DTSC has considered this comment and has determined that no regulatory change is appropriate. See the Response to Comments 3B, 9B/10B, 14B, 15A, 15B, 27D, and 29B in Section 2.6 of the Response to Comments for the 45-Day Notice for the discussion of DTSC's preliminary testing of CEDs.

Commenter B: Tia-Marie Alexander, California College Student

Comment B1: CEDs that are hazardous wastes should not be allowed to be exported to developing countries.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice.

**Commenter C: Noranda, Inc.
Micro Metallics Corporation**

Comment C1: Under the proposed regulations, recyclers of CRTs and CEDs would be required to obtain hazardous waste facility permits to process these wastes.

Response: DTSC agrees that facilities that conduct hazardous waste treatment activities, including recycling of CRTs and CEDs (in some cases), are required to obtain a hazardous waste facility permit under existing State laws. These regulations do not alter or implement those laws. In particular, the amendments presented in the 15-Day Notice do not relate to those laws.

Comment C2: Allow processing or removal of more than just discrete assemblies typically removed during normal operation...so that a hazardous waste facility permit is not required for such activities.

Response: DTSC has considered the alternative of allowing more extensive processing of CEDs than just the removal of discrete assemblies (as proposed in the 15-Day Notice) without additional authorization. However, DTSC continues to believe that some processing of CEDs necessitates the safeguards imposed by a hazardous waste facility permit. In its primary mission to protect public health and the environment, DTSC continually reevaluates its programs and implementing statutes and regulations to determine whether changes or modifications are necessary to ensure that it meets its mission. DTSC may in the future evaluate the permitting requirements for the disassembly of CEDs.

Comment C3: CED recycling activities fall under the definition of Amanagement® and recyclers will require a hazardous waste facility permit to conduct these recycling activities.

Response: DTSC agrees with the statements made in the comment that some CED recycling activities (other than the proposed allowance to remove discrete assemblies) require a hazardous waste facility permit. Again, DTSC believes that some processing activities warrant the additional safeguards ensured by the hazardous waste facility permit. See Response to Comments C1 and C2, above. In its primary mission to protect public health and the environment, DTSC continually reevaluates its programs and implementing statutes and regulations to determine whether changes or modifications are necessary to ensure that it meets its mission. DTSC may in the future evaluate the permitting requirements for the disassembly of CEDs.

Comment C4: Destination facilities for CRT materials and CEDs will have to manage these wastes as hazardous waste after arrival, per section 66267.9(b).

Response: Comment noted. See Response to Comment C3, above.

Comment C5: Destination facilities that conduct CED and CRT recycling must obtain a hazardous waste facility permit.

Response: Comment noted. See Response to Comment C3, above. In its primary mission to protect public health and the environment, DTSC continually reevaluates its programs and implementing statutes and regulations to determine whether changes or modifications are necessary to ensure that it meets its mission. DTSC may in the future evaluate the permitting requirements for the disassembly of CEDs.

Comment C6: DTSC should use the U.S. Environmental Protection Agency approach to exclude CRT materials and CEDs destined for recycling from the definition of solid waste.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. See also, Response to Comments 12A, 24A, 24K, 25A, 26B, and 28A in Section 3.3 of the Response to Public Comment for the 45-Day Notice.

Commenter D: California Certified Unified Program (CUPA) Forum

Comment D1: DTSC should create a list of CEDs that are known by DTSC to be hazardous either by testing or by manufacturer information (similar to approaches for the proposed CRT regulations and Mercury regulations).

Response: DTSC has presented its discussion why it has decided to not create a list of CEDs that are hazardous waste in Response to Comments 3B, 9B/10B, 14B, 15A, 15B, 27D, and 29B in Section 2.6 of the Response to Comments for the 45-Day Notice. In addition, although the definition of CEDs was amended in the 15-Day Notice, this comment is not related to those amendments. DTSC will make available the results of testing information specific to various CEDs in fact sheets as that information becomes available to DTSC.

Comment D2: Revise CED labeling and marking requirements to apply only to packages or accumulation containers and not to individual CEDs, which is excessive.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice.

Commenter E: Waste Management

Comment E1: Allow the use of a waterjet process for the separation of the CRT panel from the funnel. The proposed regulations are unclear whether this process is allowable under the "recirculated coolant" provision. Suggest revising the regulations using the terms "recirculated coolant or recirculated abrasive cutting media." Requests incorporation of the New Jersey Institute of Technology's (NJIT) report on the Waterjet-CRT technology (enclosed with the comment).

Response: DTSC has considered this comment and has determined that no regulatory changes are necessary. DTSC discussed its decision to allow "recirculated coolants" in CRT treatment processes in the Response to Comment 28I in Section 1.2 of the Response to Comments for the 45-Day Notice. DTSC has further clarified in the Final Statement of Reasons for this rulemaking that the enclosed CRT cutting machines, which use recirculated coolants, can include saws or other cutting mechanisms. DTSC cannot determine whether the waterjet process utilizes a recirculated coolant from the information submitted with the comment. The use of the waterjet process would be allowed under these regulations if it were configured to utilize recirculated coolant.

Comment E2: The proposed disassembly activities for CEDs are too limiting and do not include absolutely essential[®] disassembly operations that can include the removal of plastics, metal chassis and circuit boards.

Response: DTSC has reviewed the comment and has determined that no regulatory change is necessary. Please see the Response to Comments C1, C2, and C3, above, for the discussion of the rationale for limiting CED processing to the removal of discrete assemblies. DTSC may in the future evaluate the permitting requirements for the disassembly of CEDs.

Comment E3: The proposed amendments to section 66273.51 (universal waste transporter requirements) do not solve the problem of when CRT collectors place loose CRTs in a trailer, roll off box, etc. Section 66273.83 should be changed to clarify that a transport vehicle is not considered a "container" for purposes of compliance with section 66273.83.

Response: DTSC has considered this comment and has determined that no regulatory change is necessary to section 66273.83. DTSC discusses its decision to amend the requirements in section 66273.51 and not amend the requirements in section 66273.83 in the Response to Comment 28F in Section 1.4 of the Response to Comments for the 45-Day Notice. DTSC does not believe that changing the containment requirements of section 66273.83, subsection (a) to simply prohibit "loose packing" would be sufficiently protective. Again, the requirements of this subsection are consistent with federal universal waste regulations for the containment and packaging of lamps, and the acute handling hazards associated with CRT materials are similar to those of lamps.

In addition, to make the suggested changes to section 66273.83 would require that the definitions of "container" and "vehicle" be amended in section 66260.10, which is outside the scope of this rulemaking.

Comment E4: "Preventing breakage" is an impossible standard when handling CRTs; 100% containment of CRT glass is impossible. The regulations should provide more operational flexibility to allow CRTs' removal and treatment to be conducted "in a designed conveyor, table or other work area" and to "maximize the containment and minimize the spillage of any" CRT glass.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. See Response to Comment 28G in Section 1.10 of the Response to Public Comment for the 45-Day Notice.

Comment E5: Handlers should be allowed to process CRT glass for many forms of recycling (optical glass beads, decorative glass, tile products, acoustical barriers, radiation shielding, fiberglass, and lighting glass; copper smelting). Questions whether reclamation is accomplished for the types of CRT processing listed in the regulations. (Commenter claims that CRT glass qualifies for a recycling exclusion because the glass is actually being used as an ingredient or an effective substitute in CRT glass-to-glass recycling and in secondary lead smelters.)

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. See Response to Comment 28H in Section 1.11 of the Response to Public Comment for the 45-Day Notice.

Comment E6: If DTSC does not issue a new 15-Day Notice of Post-Hearing Changes it is requested that DTSC initiate a second rulemaking to consider Acleanup® language that will address all the concerns raised by the commenter (Waste Management).

Response: In its primary mission to protect public health and the environment, DTSC continually reevaluates its programs and implementing statutes and regulations to determine whether changes or modifications are necessary to ensure that it meets its mission.

Commenter F: American Electronics Association

Comment F1: The amended CED definition does not clarify the scope and the operation of the regulations. Although the definition of CED was amended, anyone who discards electronic devices still faces the dilemma of subjecting each unique type and model to expensive testing. The only other option available is to assume that all CEDs are hazardous and absorb the significantly additional costs of managing CEDs as universal wastes.

Response: DTSC has reviewed the comment and has determined that no regulatory change is necessary. DTSC has discussed its rationale for the inclusion of hazardous CEDs under the universal waste regulations in both the 45-Day Notice documents (45-Day Notice, Initial Statement of Reasons) and in the Response to Public Comments for the 45-Day Notice under Sections 2.0 and 3.0.

Comment F2: CEDs should be regulated as conditionally exempt waste, as is proposed by Electronic Industries Alliance's comments submitted as part of the 15-Day Notice.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. See Response to Comment 24A in Section 3.3 of the Response to Public Comment for the 45-Day Notice. Also, see the Response to Comment A1, above, for DTSC's response to Electronic Industries Alliance's comments regarding regulating CEDs as conditionally exempt waste.

Commenter G: City of San Diego

Comment G1: Section 66273.9(a), which exempts CRT materials from the conditionally exempt small quantity universal waste generator (CESQUWG) quantity thresholds, is in conflict with proposed section 66273.9(b), which includes the quantity of CRT devices generated as a factor when determining CESQUWG status (quantity thresholds).

Response: DTSC has reviewed this comment and has determined that no regulatory change is necessary. When the State's existing universal waste rule was adopted, the quantity thresholds for eligibility for the CESQUWG exemption were based on the total amount of hazardous waste and universal waste a person generated on a monthly basis. At that time, DTSC did not consider CRT materials in developing the quantity thresholds. In August 2001, DTSC adopted emergency regulations for the management of CRTs under the universal waste regulations. As part of this rulemaking effort, and based on the regulation of CRTs as universal waste, DTSC believes it is appropriate to include CRTs in the generator quantity thresholds for the CESQUWG exemption.

Comment G2: The inconsistency presented in the previous comment (Comment G1) will significantly reduce the number of generators eligible for the CESQUWG exemption (which allows disposal through 2006) and will put a strain on the recycling industry because of insufficient infrastructure to collect CEDs.

Response: DTSC has reviewed the comment, does not concur, and has determined that no regulatory change is necessary. See Response to Comment G1, above, for DTSC's discussion regarding the appropriateness of including CRTs in the CESQUWG exempt quantity thresholds. While the new quantity threshold (greater than five CRTs

per year) may disqualify some generators, DTSC has determined this to be the appropriate quantity threshold.

Commenter H: Californians Against Waste

Comment H1: DTSC should delete the household and the CESQUWGs disposal exemptions and require that all CEDs be prohibited from disposal (as are CRT materials).

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. See Response to Comment 13E in Section 3.1 of the Response to Public Comment for the 45-Day Notice.

Comment H2: Change CRT material and CED export provisions to align with the Basel Convention Ban Amendment.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. See Response to Comments 13A and 13G in Section 3.5 of the Response to Public Comment for the 45-Day Notice.

Commenter I: California Manufacturers and Technology Association

Comment I1: The amended CED definition does not address the commenter's concerns (as raised in a comment submitted during the 45-Day Notice) that the scope and the operation of the regulations are undefined. Although the definition of CED was amended, anyone who discards electronic devices still faces the dilemma of subjecting each unique type and model to expensive testing. The only other option available is to assume that all CEDs are hazardous and absorb the significantly additional costs of managing CEDs as universal wastes.

Response: See Response to Comment F1, above, regarding the appropriateness of regulating hazardous CEDs under the State's existing universal waste regulations. DTSC will make available the results of testing information specific to various CEDs in fact sheets as that information becomes available to DTSC.

Comment I2: CEDs should be regulated as conditionally exempt waste, as is proposed by Electronic Industries Alliance's comments submitted as part of the 15-Day Notice.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. See Response to Comment 24A in Section 3.3 of the Response to Public Comment for the 45-Day Notice. Also, see the Response to Comment A1 and F2, above, for DTSC's response to the Electronic Industries Alliance's comments regarding regulating CEDs as conditionally exempt waste.

Comment I3: The proposed CED export notification provisions will not ensure the proper handling of CEDs beyond California's borders. Recyclers who ship to developing nations can simply operate through out-of-state facilities that are not subject to the proposed export notification requirements.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. See Response to Comment 12K in Section 3.5 of the Response to Public Comment for the 45-Day Notice.

Commenter J: **California State University, Chico**

Comment J1: CEDs that are hazardous wastes should not be allowed to be exported to developing countries.

Response: DTSC has evaluated this comment and has determined that the comment does not pertain to the regulation language or content of the 15-Day Notice. See Response to Comments 13A, 13G, 14H, 24G and 24V in Section 3.5 of the Response to Public Comment for the 45-Day Notice.